

Abstract

A system for estimating the ground condition under a driving vehicle, comprising: a wheel speed sensor (4) for sensing a wheel speed signal ($t(n), \omega(n)$) which is indicative of the wheel speed of a vehicle's wheel driving over the ground (2,3) and a first analyser unit (8) coupled to said wheel speed sensor (4). The first analyser unit comprises a sensor imperfection estimation section (9) which is designed to estimate a sensor imperfection signal ($\hat{\delta}_i$) from the wheel speed signal ($t(n)$) which is indicative of the sensor imperfection of the wheel speed sensor (4); a signal correction section (10) which is designed to determine an imperfection-corrected sensor signal ($\varepsilon(n)$) from the wheel speed signal ($t(n)$) and the sensor imperfection signal ($\hat{\delta}_i$); and a ground condition estimation section (11) which is designed to estimate a first estimation value ($r(n), \alpha(n)$) indicative of the ground condition from the imperfection-corrected sensor signal ($\varepsilon(n)$).